Linksys SPA400



Trixbox Integration Guide







Access Point – Connecting You & Your Customers.

Contact: support@voipshop.com.au

Overview:

The Linksys SPA400 is a 4 Line FXO gateway capable of connecting 4 PSTN lines to your asterisk system to make and receive calls. This guide is a step by step on how to configure Trixbox to utilize the features of the SPA400. Limitations:

- * The voicemail function of the SPA400 cannot be used.
- * You cannot select which line of the SPA400 to use. They are treated as a single group of 1-4 lines. The SPA400 will know which lines are available by the line voltage when plugged in.

Configure the SPA400:

Step 1 – Obtain the IP address if the SPA400

Option 1(Easiest): You will need to check your DHCP server to see what IP address has been allocated to the SPA400 (Will usually be in the Status area of your Modem/Router).

Option 2(Harder): If you only have a few devices on your network you can use angry IP scanner (http://www.angryziber.com) which will search your network for devices. You should be able to work out the SPA400 address. Try searching for port 5060 also to help identify.

Option 3: You can download the SPA9000 setup utility from http://www.linksys.com it will scan the network for SPA400s and show the IP address.

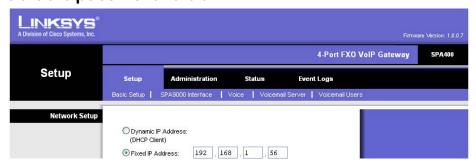
| | .066. | IP Add | tha | tΔ |
|--|-------|--------|-----|----|
|--|-------|--------|-----|----|

Step 2 – Access the SPA400

In your favourite web browser type the IP address of the SPA400, it should ask for a username and password.

The **default username** is Admin (Note capital A)

The default password is blank

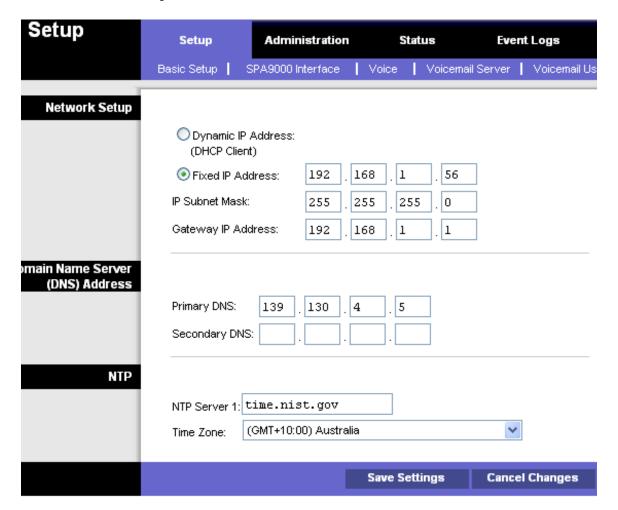


Step 3 - Set the SPA400 to a Fixed IP address

Asterisk needs to access your SPA400, so it needs to be set to a fixed ip address. To do this: -

Under Setup -> Basic Setup

- Select Fixed IP address and enter a valid fixed IP address for your network.
- Be sure to enter a DNS server, if you do not know enter the Telstra DNS server 139.130.4.5 – You can leave the secondary blank
- Set your time zone.
- Click Save Settings
- Restart System



Sample Config – Use Address Valid For Your Network Check with the network administrator if unsure.

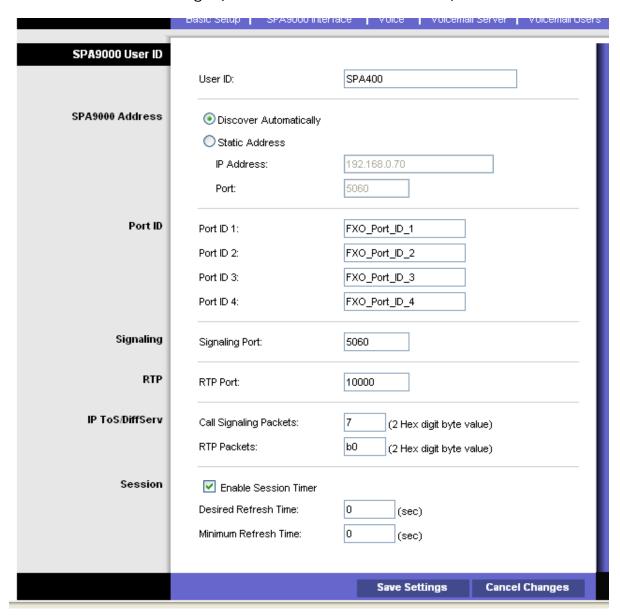
Note the IP address in the Notes Section.

Step 4 - Setup the SPA400 Voice Configuration.

Open the SPA400 in your web browser using the new IP address.

Select Setup->SPA9000 Interface.

- Enter SPA400 in the User ID:
- Leave SPA9000 on discover automatically
- No other changes should need to be made
- Click Save Settings (You Do Not Need To Restart)



Screenshot of Setup -> SPA9000 Interface

Select Setup -> Voice

For Australia you need to change: • Impedance: 220 Ohms + (820 Ohms || 120nF)
• On-Hook speed: 26ms

| Catum | | | | | | | |
|--------------------|--------------------------------|---------------------------------------|----------|-------------------------|---------------|-------------|--|
| Setup | Setup | Administra | | Status | Ever | Event Logs | |
| | Basic Setup | SPA9000 Inte | rface | Voice Voi | cemail Server | Voicemail U | |
| Voice Coders | | | | | | | |
| Preferred Coder | ⊙ G.711U | (|) G.711A | | ◯ G.729 | | |
| Voice Coders | | Packetization | VAD | | | | |
| voice coders | G.711U | 20ms V | OFF V | , | | | |
| | G.711A | 20ms 🗸 | OFF V | • | | | |
| | G.729 | 30ms 🔽 | OFF V | • | | | |
| Voice Setting | | | | | | | |
| Calling Timers | Wait-for-Ansy | wer time : | 180 | sec | | | |
| | Call Limit : | | 6553. | 5 sec | | | |
| Dialing Parameters | Tone out on: | | 200 | msec | | | |
| | Tone out off: | | 200 | msec | | | |
| | DTMF power: | | -130 | (-400 ~ 30) * | D.1 dB | | |
| | Answer after | 1 | rings | | | | |
| | Dial out wait : | 400 | msec | | | | |
| | Dial out batter | y threshold : | 20 | volts | | | |
| Line Settings | Transmit Gain | ı: | 0 0 | dB | | | |
| | Receive Gain: | : | 0 0 | яВ | | | |
| | Impedance: | | 220 O | hms + (820 Ohr | ns∥120 nF) 🕓 | • | |
| | Tip/Ring volta | ge: | 3.5 (d | efault) 🔽 | | | |
| | Operational loop current Min: | | 10mA | (default) 💌 | | | |
| | On-Hook speed: | | 26ms | (Australia) | ~ | | |
| | Ring frequency Min: | | 10 | | | | |
| | Ring frequency Max: | | 100 | | | | |
| | Ring Validatio | n Time: | 256 (d | lefault) 💌 | | | |
| | Ring Indication Delay: | | | lefault) 🚩 ms | | | |
| | Ring Timeout (ms): | | | default) | | | |
| | Ring Threshol Ringer Impeda | | | 16.5 (default) default) | <u> </u> | ~ | |
| | DC current Lir | | | e (default) | | | |
| | Caller Id Meth | _ | UK | (asiani) | ~ | | |
| | | Battery reversal as disconnect signal | | | | | |
| | | od shut-down: | _ | | | | |
| | | | | | | | |

Step 5 - Configure Trixbox Trunk.

Open your FreePBX interface: http://trixbox.ip/admin/

Select Trunks -> Add SIP trunk

Complete the form with the details below:

Outbound Caller ID: Blank

Never Override CallerID: Unticked

Maximum Channels: (the number of pstn lines plugged into the

SPA400)

Dial Rules: Leave Empty Outbound Dial Prefix: Empty

Trunk Name: SPA400 (Can be anything you wish)

Peer Details:

allow=ulaw canreinvite=no context=from-trunk dtmfmode=rfc2833

host=**x.x.x** insecure=very type=friend user=SPA400

USER Context: Leave Blank

USER Details: Blank (Delete the default information)

Register String:

SPA400@x.x.x.x/SPA400

Note: x.x.x.x should be where you enter the IP address of the

SPA400

Click Submit Changes.

Step 6 - Configure Outbound Route.

You can now treat the SPA400 like any other trunk. To add an outbound router (eg, dial 9 to dial out the SPA400)

Outbound Routes -> Add Route

Route Name: SPA400PSTN (this can be anything)

Route Password: Blank

Emergency Dialing: Unticked Intra Company Route: Unticked

Dial Patterns: 9|.

Trunk Sequence: SPA400

Click Submit Changes

Step 7 – Configure Inbound Route.

This will setup an inbound route for people who call the PSTN lines plugged into the SPA400.

Setup -> Inbound Routes -> Add Incoming Route

DID Number: SPA400 (case sensitive)

Caller ID Number: Blank Zaptel Channel: Blank

Fax Handling Leave as is

Select the Destination

Click Submit

Click the Red "Apply Configuration Changes" to reload asterisk

Complete:

You should now be able to make and receive calls via your SPA400.

Email support@voipshop.com.au for further support if required.

Congratulations

| Notes: | |
|--------------------|---|
| SPA400 IP Address: | |
| SPA400 Username: | |
| SPA400 Password: | |
| Number of Lines: | _ |
| Installed By: | |
| Date: | |